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DOCUMENTS, REPORTS, AND LEGISLATION

Industries and Commerce

Of the eleven volumes of reports of the thirteenth census, vol. 9, dealing with manufactures by states and cities, is the first to be published (Washington, 1912, pp. 1404). This is simply a combination of the several state bulletins already published.

Special emphasis is laid in the *Report of the Secretary of the Interior, 1912*, on the need of a definite and comprehensive water-power policy (pp. 16-23). This document also contains a review of the decade of national irrigation work under the Newlands act of 1902 (pp. 25-32).

It is announced that the statistical work of the American Iron and Steel Corporation, hitherto carried on by Mr. James M. Swank, will be transferred to the American Iron and Steel Institute. Mr. Swank retires from active work after a service of forty years, and Mr. William G. Gray will become the responsible head of this branch of the Institute's service.

The *Report of the Proceedings of the Seventh International Congress of Dry Farming*, held at Lethbridge, Alberta, October 21-25, 1912, may be had upon application to Mr. John T. Burns, executive secretary-treasurer, Oklahoma City, Oklahoma.

Circular No. 163, issued by the Agricultural Experiment Station of Illinois, is devoted to a brief statistical study of the relation of the United States to the world's beef supply (Urbana, July, 1912, pp. 11). There are charts showing, for different countries, cattle per capita, cattle per square mile, and exports of beef and cattle from the United States.

A pamphlet on *Bolivia*, prepared by the Bolivian Legation, may be had of the Pan American Union (pp. 72). A map with a considerable amount of statistical material dealing with the Argentine Republic in 1911 has been prepared by Dr. Peña and may be had upon application (Comité Argentino, Buenos Ayres, Florida, 753).

The International Institute of Agriculture (Rome) has published its first year book, *Annuaire Nationale der Statistique Agricole*, 1910 (1912, pp. 324). For the first time comparative statistics are presented for a large number of countries, with uniform denominations of measure and weight. The volume, for fifty countries, reports upon the area and population of each, the distribution into productive

and non-productive areas, and the distribution of productive areas into the seven categories of arable lands, pastures and meadows, vineyards, gardens, orchards and other crops, woods and forests, and marsh, heath and waste lands. The statistics cover the decennial period 1901-1910.

Corporations

The *Report of the Investigation of the Chicago Telephone Company*, submitted to the Committee on Gas, Oil and Electric Light, by Edward W. Bemis (Chicago, 1912, pp. 127), is based upon a detailed appraisal of the physical property of the Chicago Telephone Company. The records of this appraisal fill ten typewritten volumes, and were made by a force of 160 men working for about a year, plus 60 men working for an additional two months, at a total cost of a round quarter of a million dollars.

The appraisers proceeded upon the theory that the true value of the plant was its total cost of reproduction new, less depreciation. This appraisal gave a total reproduction value new of the physical property within the city of Chicago amounting to \$34,325,894. To this sum was added \$564,636 for plant development expense and \$4,753,993 for cost of developing business. Professor Bemis disallowed the latter items, contending that, whether called for or not by the theory of valuation upon the basis of cost of reproduction, they did not represent expenses actually incurred or were amply covered by accrued profits. He then made a critical examination of the appraisal of the physical property, and concluded that items amounting to \$2,065,947 should be rejected. His final conclusion was that reductions of rates calculated to reduce the reported income of the company by \$700,000, that is a trifle less than 7 per cent of the gross receipts for 1911, were warranted by the evidence.

The significance of this report to the economist lies in the evidence it affords concerning the merits of the theory of cost of reproduction as a method for the valuation of public utilities. Professor Bemis deliberately rejects this theory as applied to certain details of the valuation, and casts some doubt upon its soundness in principle. The report is printed for distribution.

A. N. HOLCOMBE.

Reference was made in the last number of the REVIEW (vol. II, p. 964) to the work of the Department of the National Civic Federation on Regulation of Utilities (1 Madison Ave., New York). Additional pamphlets have been issued in two groups. The first repre-

sents parts of a compilation and analysis of public utility regulation laws of the United States on the following subjects:

Basis of Rate Making (pp. 43);

Regulation of Intercorporate Relations (pp. 17);

Regulation of Accounting Practices (pp. 32);

Publicity of Rates (pp. 62);

Franchises (pp. 42);

Regulation of Stock and Bond Issues (pp. 57).

Another series deals with the drafting of a model public utilities bill. This investigation promises to be of exceptional value, for it deals with actual conditions and laws. The inquiry has been extended to England, with particular reference to the sliding-scale principle, the regulation of capitalization, public audit, and methods of selling stock at auction.

President Percival S. Hill, of the American Tobacco Company (111 Fifth Ave., New York), has issued a typewritten statement under date of November 18, 1912, discussing the new competitive conditions created under the dissolution decree of the United States Circuit Court. A reason is given for the rise in price of the subsidiary stock. There is also an interesting explanation why price cutting in the tobacco industry does not increase the volume of manufacturing business.

The Harbor and Subway Commission of Chicago has published a *Supplemental Report on a Comprehensive System of Passenger Subways* (No. 30, 1912, pp. 24), in which the criticisms of its former recommendations are analyzed and answered. There is a chart to illustrate the "rush hour" traffic.

The Railway Business Association has reprinted two of the addresses delivered at its annual dinner, Dec. 19, 1912: "The Country's Need of Greater Railway Facilities and Terminals," by James J. Hill (pp. 15) and "The Canadian Method of Preventing Strikes and Lockouts," by W. L. Mackenzie King (pp. 20).

The Stone and Webster Public Service Corporation (Boston), has issued a separate reprint of "Valuation of Public Service Properties," by L. R. Nash, originally published in the October, 1912, issue of the journal published by this corporation.

Prompted by the recent controversy over the operations of the New York, New Haven and Hartford Railroad, the Board of Railroad Commissioners of Massachusetts, in its annual report for 1912,

enters into a general discussion of railroad policy and the position to be taken by the state (pp. 73-89).

The Bureau of Railway Economics, in Bulletin No. 39, makes a study of *Comparison of Capital Values: Agriculture, Manufactures and Railways* (Washington, pp. 38). Census figures for 1910 are utilized.

On October 23, 1912, the Railroad Commission of the State of California adopted uniform and compulsory systems of accounting for the gas, water, and electric corporations operating in the state and coming under the jurisdiction of the commission (*Uniform Classification of Accounts for Gas Corporations Prescribed by the Railroad Commission of the State of California. Adopted October 23, 1912. Effective January 1, 1913. For Electric Corporations. For Water Corporations*, pp. 63, 69, 54). Each classification is in accordance with section 44 of the law of 1911, known as the Public Utilities Act, and went into effect on January 1, 1913. The general plan of classification is the same for all three classes of corporations, providing in each case (1) balance sheet accounts, including such asset, liability, capital stock and surplus accounts as are usually placed in the general ledger and balance sheet; (2) detailed property or plant accounts; (3) the general income accounts which are necessary for a periodical revenue and expense statement; (4) corporate surplus or deficit accounts; (5) detailed revenue accounts; (6) detailed expense accounts, and (7) so-called clearing accounts. The accounts under 1, 3, 4, and 7 are practically the same in all three classifications, while those under 2, 5, and 6 differ a great deal. Thus a high degree of uniformity is secured between the accounts of all three kinds of corporations, without preventing special adaptations to the particular kind of business. On the whole, the classifications are admirably worked out. But there is one serious oversight: no provision is made to show functional costs—the costs per unit of service—which perhaps would furnish even more useful information than will the detailed expense accounts that are provided.

J. BAUER.

Labor

FEDERAL WORKMEN'S COMPENSATION. The workmen's compensation law affecting certain employees of the United States government has been in operation for several years, but despite the great public interest in the general subject very little attention has been directed toward it. The *Opinions of the Solicitor for the Department of Com-*

merce and Labor dealing with Workmen's Compensation (Washington, 1912, pp. 646) will be of great assistance to those engaged in administering similar acts in the various states. The volume also contains the opinions of the Attorney General and the decisions of the Comptroller of the Treasury. The report covers a period of four years ending August first, 1912.

The act of May 30, 1908, grants compensation to artisans and laborers employed by the United States who receive, in the course of their employment, injuries not caused by their negligence or misconduct, the effect of which lasts more than fifteen days. It applies to employment in "manufacturing establishments, arsenals or navy yards, or in the construction of river and harbor or fortification works or in hazardous employment on construction work in the reclamation of arid lands . . . or in hazardous employment under the Isthmian Canal Commission." The act has been extended by amendment to cover all employees of the Canal Commission and all employees engaged in hazardous work under the Bureau of Mines, the Forestry Service, and the Lighthouse Service. The Secretary of Commerce and Labor is entrusted with the administration of the act except as to the employees of the Isthmian Commission who, since the amendment of March 4, 1911, have been under the charge of the chairman of that commission. The amount of compensation is limited to one year's pay; if the employee is killed his dependents receive this amount.

The laws now in force in many states are all more liberal than the Act of Congress, but many questions similar to those which will arise under them have been considered by the Solicitor in construing the United States law. The limits of this review will allow us to consider only one feature of the law. The act of May 30, 1908, differs in phraseology from the English law in one important particular. Under that law the employer is liable for injuries due to accidents "arising out of and in the course of" the employment. The United States law covers all injuries received "in the course of" the employment. The Solicitor points out that the United States law is broader than the English law (p. 232) and covers injuries received while at work though they may not be due to the prosecution of that work. The distinction is a fundamental one. The object of the new laws has been to redistribute the burden of industrial injuries. Under the old law of liability a large part of the burden fell on the injured employees themselves. This was considered unfair and an attempt has been made to impose on industry the burden of injuries due to its

operation. Under this scheme those injuries only should be compensated by the industry which are caused by it. There is no more reason for including an injury received by a man while at work which was not caused by his employment than for including an injury received by that man while at home.

The laws of many of the states are the same in phraseology as the English law, but in several of them the wording is similar to the United States law. Under that law, as construed by the Solicitor, all injuries, though not caused by the employment, are to be compensated provided they were received while the employee was at work. In these states, therefore, industry will be burdened by the cost of injuries not caused by its operations.

A careful consideration of the able opinions contained in this volume shows clearly the narrow scope of the act: it applies to a small portion only of the government service; the amount of compensation is limited to one year's pay; there is no provision for medical attendance; the employee receives no compensation if the injury is due to his negligence. The rulings of the Solicitor on this last point have been liberal, but it is a part of the law which might, under a technical interpretation, prevent the allowance of meritorious claims.

The act even with its limitations represents an advance over the former law. It has greatly benefited the government employees covered by it (p. 11). The Secretary of Commerce and Labor considers it to be a good law and has advised that its provisions be extended. It is to be hoped that the Congress will act on his suggestion.

JAMES A. LOWELL.

STATE INDUSTRIAL INSURANCE IN WASHINGTON. To the voluminous account of the first year's operation of the Washington workmen's compensation act (*First Annual Report of the Industrial Insurance Department. For the Twelve Months Ending September 30, 1912*, Olympia, 1912, pp. 516) much interest attaches, for the act is from various points of view remarkable. Alone among American acts it is compulsory—compulsory upon all employers in the extra-hazardous trades. With only one other state it shares the distinction of providing a state insurance system; more exactly, in the phrase of the report, "state administration of collective funds." It makes little attempt to relate the awards payable to the rates of wages of the injured or deceased workmen. There is generally no limitation of the period of award to three years or six years as is common in other acts. Payments, sometimes commutable to lump sums, may endure as long

as the consequences of the accident endure. Widows may draw pensions till they die; no other state so provides. The reserve for pension cases is limited to \$4,000, but there is no other limitation on the amount payable. The criticism has been made that the Washington act, not measuring awards by wages, is essentially a poor-relief system; but the criticism is pointless since all modern compensation acts rest first of all upon a desire to deal comprehensively and adequately with a blameless kind of dependency. The Washington act has emerged successfully from the purgatory of the courts. Assailed as unconstitutional on four grounds it was held by the state supreme court to violate "no provision of either the state or federal constitutions,"¹ the previous decision of the New York court notwithstanding.

Indications are that this complicated law has well approved itself in its first twelve months. The various hazardous trades are grouped by classes, and percentages of the pay-rolls are levied as premiums; the percentages vary from 1.5 per cent as in cordage establishments to 10 per cent in powder works. The "accident fund" is composed of forty-seven different parts, no one of which is liable for a depletion of the fund from accidents happening in any other class. Class 10, including operation and repair work in connection with "logging; saw mills; shingle mills; lath mills; masts and spars with or without machinery," is found to be particularly large, comprising 42,164 of the 188,084 employees protected last year. In this class were 46 per cent of the 279 fatal accidents. Of all workmen killed, nearly half were foreigners. Total accidents reported were 11,896. Claims fully and finally awarded were 6,356; rejected were 378. Twenty-five days' disability were averaged. Claims suspended were 1900, chiefly because the workmen, their injuries being trivial, had not themselves presented claims; but partly because claimants could not be located. In 150 pages of the report are reproduced by classes of risk, the names of all contributors to the fund and their respective payments, claims, and awards.

The administrative costs of the system have not exceeded expectations and have not been, as such costs go, high. The legislature had appropriated \$150,000 for twenty-two months' expenses. The theory, be it recalled, is that every dollar collected from employers should go for compensation. In the first sixteen months—four of organization, twelve of operation—the actual expense fell slightly (by \$1200) under the allowable average. Expenses consumed 9.9 per cent of income. The remaining 90.1 per cent were the sums, totalling \$980,445,

¹ *State ex rel. Davis-Smith Co. vs. Clausen, State Auditor*, 65 Wash., 156.

collected from employers. Claims paid were 40.9 per cent of income; the reserve fund for the continuing pensions was 22.4 per cent; cash in the fund was 26.8 per cent. Beyond doubt the expense rate has been kept commendably low, yet the comparison made by the report with the German rate of 12.8 per cent is not at all appropriate, because of the unreckoned differences of the systems. The expense rate was in part kept low by the successful avoidance of the costly intercession of professional claim experts. This was accomplished by securing the facts about accidents from workmen, employers, and physicians, each on different elaborate forms, and then by a process of cross-checking. In passing be it said that inserted samples of these and other forms are an interesting adjunct of the report. The commission has made investments of reserve funds in public bonds yielding 5 per cent to 6 per cent, and averaging 5.156 per cent, a fortunate return hardly possible in the East.

Although accidents were reported for 12,000 persons, "a surprisingly small number give any evidence of an attempt to either deceive the compensating board or obtain money by false pretenses." The aid of an expert railroad-claims investigator was utilized when fraud or malingering was suspected. No suits for fraud were filed. But 43 suits were filed against defaulting employers for premiums due. The extraordinarily small number (21) of appeals from compensation decisions "is due to the short period allowed for appeals, the unfamiliarity of claimants and attorneys with the procedure for appeal, the certainty and rigidity of the award schedules and the state-wide disposition to give the law a fair test in practice, even though numerous claimants have been silently dissatisfied with the amount awarded by the commission."

To the recommendations of the commissioners special interest attaches since initially all compensation acts are experimental. They urge that no general increase in the scale of awards be made. Though scarcely any other state pays so liberally, the Washington Federation of Labor had asked for an increase. But for special classes an increase is recommended: for the dependents of minor workmen, for workmen totally disabled permanently; for widows with children. In the last case the maximum award should be increased from \$35 to \$45 per month to apply to families where there are a number of small children. By these three recommendations the relief character of the act is, wisely enough, further emphasized.

It is recommended that casual employers in construction work be required under penalty to notify the commission of their work at its

beginning. Elsewhere the report had dwelt on the distressing difficulty experienced in reaching casual employers; the present recommendation merely grazes the problem. It is proposed that the inspection "of dangerous machinery and agencies and of conditions conducive to accidents, including boilers and logging operations" be placed under the jurisdiction of the commission, which should also have power to establish minimum standards of safety. Elsewhere praise had been given the Wisconsin system which in this matter resembles the German. Power is also sought for the commission to reduce the rates of well safeguarded establishments—a common European practice or provision. A chair of industrial safety, with provision for extension work, should be established at the state university. Other recommendations concern hospital funds, first aid, the use of voucher checks and other matters.

The unsolved difficulties of casual employment, the compulsory inclusion of occupations not highly hazardous, the need both for greater adequacy of administration and for pruning of costs, these and other problems will be the ground for recommendations in many years to come. Yet one year has answered the doubters: an American state, not an old one at that, can by any reasonable test beneficently wield a complicated piece of social legislation.

ROBERT F. FOERSTER.

Harvard University.

COMPENSATION FOR INDUSTRIAL ACCIDENTS IN MASSACHUSETTS. In 1910 a commission was appointed in Massachusetts to determine upon a plan for compensating workers for injuries received in the course of their employment (Ch. 120, *Resolves* of 1900). This commission made a preliminary report in 1911 (see *REVIEW*, vol. I, p. 899), which resulted in legislation. The final *Report of the Commission on Compensation for Industrial Accidents* (July 1, 1912, pp. 322) has now been submitted. This contains a statement of the commission's work, summaries of foreign and American compensation acts, a brief on the constitutionality of compulsory compensation, and reprints of the text of existing American compensation acts, with an explanatory commentary on the act of Massachusetts.

On the general problems of compensation legislation the most interesting part of the report is that devoted to the commission's study of Massachusetts industrial accidents from May 1, 1911 to July 1, 1912. During this period, employers were required by legislation to report their accidents to the commission. On the information contained in these reports the commission has tabulated and reported

only facts relating to the frequency and seriousness of accidents for the period between May 1, 1911 and May 1, 1912. The original purpose of this study was to determine the cost of compensation and to work out a fair schedule for the act. Unfortunately, the present Massachusetts compensation schedule was prepared before the commission's study was fairly under way and as yet no changes in the schedule have resulted from it. The results of the study are, however, presented by the commission "for the purpose of affording a basis for the calculation of the cost of compensation under the new law."

The report states that the figures presented cannot be relied upon for the purpose of fixing insurance rates for any individual employer. The commission did not have accurate information as to the number of employers or employees engaged in the various industries in the state; nor is there any means of determining whether all of the accidents which occurred during the period covered were reported. Moreover, the period studied was too short to furnish dependable statistics. The result is, as the commission frankly states, that its figures do not accurately represent either the number of accidents or the seriousness of the consequent disability. The value of these statistics as a basis for generalization may be estimated from the following statement contained in the report:

The commission is well aware, as has been repeatedly pointed out, that these statistics contain defects which could not be eliminated, but a majority of the commission believes that it is justified in presenting the data that it obtained in the course of its investigations even though fuller information derived from experience under the new law may hereafter disclose defects not now apparent.

As the report points out, the statistics tabulated disclose some interesting tendencies. Table 2, distributing injuries in accordance with the German classification showing for each industry the number of establishments, the number of employees, and the number of accidents fatal and non-fatal, shows a death-rate of .45 per 1,000 employees. This rate compares with .80 in Germany and .70 in Austria. Commenting on this low rate, the commission says: "This is probably due to the fact that the industries of this state are so largely of a non-hazardous character. It is well known that the textiles, boots and shoes, and other light factory industries, while they entail a considerable number of minor injuries, do not cause many deaths."

Perhaps the greatest value of the work done by the commission during the period of this study has been the education of employers to report accidents and the formulation of a classification and methods

of tabulation which will be of value to the Industrial Accident Board, which on July 1, 1912, took up the permanent work of collecting and tabulating statistics with relation to the causes and the cost of industrial accidents.

THOMAS I. PARKINSON.

In the summary by Miss Wells, of the nineteen-volume report on *Condition of Woman and Child Wage-Earners in the United States*, published in the REVIEW for June, 1912, page 436, no mention was made of volumes 13, 14, 17, 18, and 19. Volume 13, *Infant Mortality and its Relation to the Employment of Mothers*, has now appeared (Sen. Doc. No. 645, 61 Cong., 2 Sess., 1912, pp. 174). Part I is a study of Massachusetts statistics by Edward B. Phelps; and Part II is a more intensive study, restricted to Fall River, Mass. Volume 17 deals with the *Hookworm Disease Among Cotton Mill Operatives*, prepared by C. W. Stiles (pp. 45).

The Bureau of Labor has also made a *Report on Strike of Textile Workers in Lawrence in 1912* (Sen. Doc. No. 870, 62 Cong., 2 Sess., pp. 511). This is a most careful investigation presenting the documentary material in regard to the strike; the wages and hours of labor, and conditions of work; housing conditions; retail prices and cost of living. Wage data were secured from the pay-rolls of 21,922 employees, or about one half of the total population in Lawrence of working age. Nearly one fourth of the total number earned less than 12 cents per hour.

The "American Labor Legislation Review" for December, 1912, is devoted to *An Immediate Legislative Program*. The docket of pending reform is one day of rest in seven, protection from lead poisoning, uniform reporting of accidents and diseases, compensation of federal employees for accidents and diseases, state workmen's compensation legislation, the investigation into industrial hygiene and safety, protection for working women, and enforcement of labor laws. Useful extracts from documents and reports, with references, are given, designed to be of assistance to those engaged in campaigning for the foregoing objects. Maps and charts are included, and altogether the volume is a most important compendium.

The Department of Agriculture has again reported upon *Wages of Farm Labor* (Washington, Nov. 7, 1912, pp. 72). This represents the nineteenth investigation, the first being undertaken in 1866, and the last previous one in 1906. The inquiry is edited by George K. Holmes.

Mr. Holmes has also prepared for the Department of Agriculture

a bulletin on *Supply of Farm Labor* (Nov. 9, 1912, pp. 81). This is announced as the first comprehensive treatment of farm labor on the side of supply that has been published.

Some scattered data in regard to the methods and purposes of the Industrial Workers of the World may be found in *Report of Harris Weinstock* who was appointed by Governor Johnson of California a commissioner to investigate the recent disturbance in the city of San Diego (Sacramento, pp. 23).

The West Virginia Mining Investigation Commission appointed by Governor Glasscock in August, 1912, has made its report of *Investigation into Strikes in Kanawha County*.

The third issue of the Child Labor Bulletin (105 East 22d St., New York) contains a summary of legislation for the year ending September 30, 1912.

The Illinois Bureau of Labor has published a pamphlet containing suggestions in regard to the operation of the workmen's compensation law which went into operation May 1, 1912. The bureau is also publishing as occasion needs a series of pamphlets on questions arising in regard to the consideration of the law. These pamphlets as well as the text of the act may be obtained from the secretary at Springfield, Illinois.

Money, Prices, Credit, and Banking

"THE EQUATION OF EXCHANGE" FOR 1912, AND FORECAST. The following is a preliminary statement of the equation of exchange for 1912. It is constructed without the aid of the index number of prices of the Bureau of Labor or of the statistics of volume of trade from the Bureau of Foreign and Domestic Commerce, neither of which is yet available. In place of the Bureau of Labor statistics for the price level, I have used Bradstreet's index number; and in place of fuller statistics on the volume of trade, I have taken the median percentage increase of the figures of 1912 over those of 1911 for the following nine items: cotton production, oats, railroad gross earnings, tobacco, rye, wheat, corn, pig iron, and barley, the cotton having shown a decrease and all the others, an increase in the order given.

Bradstreet's index number showed an increase of 5.4 per cent for 1912 compared with 1911, which agrees closely with the figures (5.3 per cent) of Mr. Coats for Canada based on 260 commodities and is not far from the figure (6.2 per cent) of the "Economist" for England.

The figure for velocity of circulation of money is assumed arbi-

trarily to be 21 times a year on the basis of the calculations given in *The Purchasing Power of Money*. The other figures for (1) money in circulation, (2) deposits subject to check and (3) their activity or velocity of circulation, are calculated by the same methods as those described in last June's article, "The Equation of Exchange for 1911 and Forecast."

The two sides of the equation of exchange thus calculated agree within about 2 per cent, and to make them agree perfectly I have altered the figure for the volume of trade from \$444,000,000,000, as first calculated, to \$435,000,000,000 (both reckoned in terms of the prices of the base year 1909) and have altered the price level from 107.7, as originally calculated, to 107.6 (on the basis of the base year 1909 as 100 per cent).

The results thus corrected and expressed in *billions* of dollars, are as follows:

$$\begin{array}{l} \text{Circ. of money (36)} \\ \text{Money} \times \text{its veloc.} \\ 1.76 \times 21 \end{array} \left. \vphantom{\begin{array}{l} \text{Circ. of money (36)} \\ \text{Money} \times \text{its veloc.} \\ 1.76 \times 21 \end{array}} \right\} + \left\{ \begin{array}{l} \text{Circ. of checks (432)} \\ \text{Deposits} \times \text{their veloc.} \\ 8.15 \times 53 \end{array} \right\} = \left\{ \begin{array}{l} \text{Value of goods bought} \\ \text{(468)} \\ \text{Trade} \times \text{Scale of} \\ \text{prices} \\ 435 \times 107.6 \text{ per cent} \end{array} \right.$$

Comparing these figures with those calculated for 1911, we find that the money in circulation has increased 3.7 per cent; the deposits subject to check, 4.8 per cent; their "activity" or velocity of circulation, 6.2 per cent; the volume of trade, 5.3 per cent; and the level of prices, also 5.3 per cent.

These results and other statistics confirm in almost every respect the prophecy ventured in last year's article:

The outlook for the next year or two in the United States would appear to be for a reduction of gold imports, a slackening in the growth of bank reserves and deposits; and an increase of money in circulation, both absolutely and *relatively to deposits*. The activity of deposits seems likely to remain excessive and the volume of trade to increase slightly. The net result will probably be a slight rise in prices.

The only substantial departure of the facts from this forecast is in respect to the italicized statement. Money in circulation increased 1 per cent less rapidly than deposits.

The course of events in the year 1913 will depend largely on the date as well as the character and extent of the expected tariff revision. If this revision is prompt and thoroughgoing it should have the effect of checking the present inflationistic tendency, encouraging the import of goods and the export of gold. Quite irrespective of the merits of tariff revision, this arrest of inflation should prove an antidote to the impending overstimulation of business and postpone the crisis

in which such undue expansion generally culminates. It seems unlikely that the revision could be so great or its effect so drastic as to itself precipitate a crisis. It would not, however, be surprising if in other countries such as Canada, Germany, and Japan where there is, apparently, no prospect of such an arrest of inflation, a crisis should soon materialize, perhaps within the next year or two.

I shall not take space here to attempt a justification of these guesses as to the future.

IRVING FISHER.

A CREDIT UNION IN MASSACHUSETTS. In 1909 the Commonwealth of Massachusetts passed an act (chapter 419) authorizing the establishment of credit unions, which are defined by the act as "coöperative associations formed for the purpose of promoting thrift among their members." This very comprehensive act is the first law enacted in the United States authorizing the establishment of associations along the lines of those which have proved so successful in other countries. The act contemplated the formation of coöperative credit unions modelled essentially on the plan of the Raiffeisen and Schultze-Delitzsch banks of Germany.

A concrete example of such an association is the Myrick Credit Union formed in 1910 by the employees of the Phelps Publishing Company of Springfield, Massachusetts. This has a membership of about one hundred. The operations as yet are on a small scale. The total business for the year 1912 was \$7,319, and the deposits amounted to \$1,419. The union purposes the extension of its field of operations to include the employees of the Phelps Company in New York, Chicago, Aberdeen, S. D., and other cities where they have branch offices.

In general, the object of the credit union is to encourage members to save their earnings. Specifically, the chief objects of the association, as set forth in the constitution, are "to protect its members against reverses of fortune . . . to aid them by a wise and provident system of credit in the shape of loans and advances . . . to secure the practice of virtues that mark the good citizen . . . to combat usury . . . to spread amongst its members a practical knowledge of the elementary principles of economic science . . . to teach them respect for their engagements . . . to gradually procure their . . . economic independence."

The capital of the association is variable in amount and consists of 687 shares of the value of \$2.00 each, which sum may be paid down or

by ten-cent weekly instalments. An entrance fee, fixed by the board of directors, is charged upon each share. This amount, now 10 cents per share, in addition to twenty per cent of the net profits of the year, forms a guaranty fund. This with the capital represented by the shares subscribed, the provident fund, and the resources secured by the loans, constitute the funds of the association. The provident fund, consisting of ten per cent of the profits of the year, is maintained "to cover the first extraordinary losses of the year, resulting from the operation of the association and for other purposes." This may be discontinued when it reaches an amount equal to one half the maximum capital.

The qualifications for membership in the union are honesty, punctuality in payment of debts, sobriety, good habits, and industry. Of those borrowing from the funds of the union, certain other things are required, such as good standing in the association with no unpaid loans. Each member must hold at least one share in the union, but no member may hold more than a maximum number, which is fixed by the general meeting of the organization. At present this is 125 shares, representing an investment of \$250. This amount greatly exceeds the number of shares held by the average member. Besides the amount received from the purchase of shares, the union also receives from the members deposits limited to \$250 per shareholder.

During the early history of this union, the amount of the loans was limited to \$250, for a period of one year, at 7 per cent subject to renewal for another year. No security was asked, the loan being made on the mere signing of a note. Recently, however, the maximum amount of a loan was reduced to \$50 for three months, renewable for another three months. Security has also been required, usually an assignment of wages or insurance. It is probable that the amount obtainable by loan will be again raised, but it is not expected that it will exceed one hundred dollars for one year. There has been for some time past a sliding rate of interest with a minimum charge of fifty cents, which is regarded as unfairly high, and the credit committee is looking to the establishment of a lower rate of interest. Each borrower must state in his application the purpose for which he asks the loan, and this must then be passed upon by the credit committee, which is bound by the constitution to give the preference to small loans, provided the security for repayment is equally good.

While only about twenty per cent of the employees of the Phelps Publishing Company have thus far availed themselves of the benefits of the credit union, at least seventy-five per cent of the share-

holders have become borrowers or depositors. The shareholders who constitute the credit and supervisory committees are prohibited by the constitution from becoming borrowers from the funds of the union.

The organization of the union conforms exactly to the Massachusetts act of 1909. In addition to the usual officers, the conduct of the association is in the hands of three committees: a board of seven directors elected for two years, a supervisory committee and a credit committee, of three members each; the supervisory committee being elected for one year, and the credit committee for two years. The board of directors is given the most extensive powers. This body may refuse admission to applicants for membership, pronounce upon expulsion of members, determine expenses of management, adopt by-laws relating to organization, propose dividends to be paid, and determine the manner in which money of the union shall be invested. The credit committee, as stated above, decides upon all loans. The supervisory committee is general guardian of the funds and operations of the organization.

Dividends are paid after the expenses of operation, twenty per cent for the guaranty fund and ten per cent for the provident fund, are deducted from the year's profits. But dividends may amount to but six per cent till the guaranty, provident, and other funds are complete.

ALEXANDER E. CANCE.

Massachusetts Agricultural College.

THE INTERNATIONAL CONFERENCE ON BILLS AND CHECKS. The second International Conference on Bills of Exchange was held at The Hague, beginning on June 15th last, and closing on July 23rd. The conference bore fruit in the adoption of a complete draft of a uniform law on bills of exchange, which was signed by the leading Continental powers, and will probably be adopted by them within the next two or three years, as soon as legislative machinery can be set in motion. The delegate of the United States, Mr. Charles A. Conant, and the delegates of Great Britain, did not sign the protocol, because of the wide difference in the bases of Anglo-American and Continental law and because some thirty-eight of the American states and most parts of the British Empire had already adopted a substantially uniform negotiable instruments law. The presence of the delegates of the Anglo-American powers, however, tended to secure many modifications in the draft of the uniform law in the direction of simplicity and flexibility. Among the cases in which the Anglo-American rule

prevailed were the option given to contracting states to discard the specific designation of a bill of exchange as such in order to give it validity; the right of a drawer of a bill to draw upon himself; the recognition of presentment for payment through a clearing house; the right of the drawer to stipulate for indefinite extension of the time for acceptance of a bill payable at a fixed time after sight; and the extension of the rule of *force majeure* to cases not purely personal.

The conference also adopted some resolutions on the check, intended as the groundwork of a uniform law, but so much time was spent in perfecting the law of bills that the resolutions did not assume the form of a complete project of law. Among the provisions of the check resolutions was the adoption of the English system of the crossed check. Another conference will be called by the government of The Netherlands within the next two years to compare views in regard to the check and complete a draft of a uniform law on the subject.

Parts 7 to 17 of the *Money Trust Investigation*, by the subcommittee of the Committee on Banking and Currency, have been printed (1913, pp. 505-1266). These cover the hearings between Dec. 9 and Jan. 6. Mr. Morgan's testimony may be found in parts 14 and 15. Part 16 contains documentary material and statistics in regard to clearing houses, dealings in various stocks, 1906-1912, with diagrams and relationship of certain New York banks with their correspondent banks.

Part II of Bulletin No. 106 of the United States Bureau of Labor, entitled *Retail Prices 1890 to June, 1912* (Aug. 28, 1912, pp. 205), contains the general tables showing the actual prices of the principal articles of food, and of coal, upon which the summary in part I was based.

Bulletin No. 108 deals with *Retail Prices, 1890 to August, 1912* (Oct. 1, 1912, pp. 154). (See REVIEW, vol. II, p. 969.)

In the *Report of the Secretary of Agriculture, 1912* (Washington, pp. 279), there is a brief and condensed summary of the results of a recent inquiry in regard to the need of further agencies of rural credit. The investigation was made through a questionnaire sent to 9000 correspondents.

On this same subject is to be noted *Preliminary Report on Land and Agricultural Credit in Europe*, which includes the letter of President Taft to the governors of states, and the recommendations of Ambassador Herrick (Washington, pp. 38).

The Wisconsin State Board of Public Affairs has recently taken up the subject of coöperation, both in production and in credit. Two pamphlets are the result: *Report upon Coöperation and Markets; Part I, Agricultural Coöperation* (pp. 132); *Part II, Coöperative Credit* (pp. 27). Mr. John F. Sinclair is responsible for the preparation of each of these. The first part contains a bibliography of eleven pages, and the second part, two pages.

The National Federation of Remedial Loan Associations has begun the publication of a *Bulletin*. The first number, for June, 1912, contains the proceedings of the annual convention held at Cleveland, June 13-14, 1912 (pp. 46). Another leaflet shows the *Work of the Remedial Loan Societies 1911-1912* (Secretary, 914 G. St. N. W., Washington, D. C.).

The effort to find an explanation for the rise in retail prices is responsible for *A Study of Trolley Light Freight Service and Philadelphia Markets in their Bearing on the Cost of Farm Produce*, by Dr. Clyde L. King, of the Wharton School of Finance, Philadelphia. A table shows for certain farm products the price at the farm and at Philadelphia, and the successive increments added by transportation and handling by the jobber, wholesaler, and retailer; for example, the farmer got 63 cents for a bushel of potatoes; freight to the terminal added 9 cents; the jobber got 8 cents, the wholesaler, 10 cents, and the retailer, 40 cents, making the consumer's price \$1.30. The report contributes new data to the subject of markets, and throws light upon the Pennsylvania system of taxing mercantile sales. Copies of the report may be had upon application to the Department of Public Works, City Hall, Philadelphia.

Mr. John Harsen Rhoades (45 Wall St., New York) delivered an address before the Finance Forum of New York City, December 18, 1912, on *Who Shall Control our Financial Destiny* (pp. 8). Mr. Rhoades favors the Aldrich plan, but suggests that the Board of Management be reduced from 45 to 14, and that the members be appointed by the President instead of being elected by bankers or any special interest.

Laws Relating to State Banks, Trust Companies, and Savings Institutions in Force in the State of Maryland have been compiled in a separate pamphlet (Bank Commissioner, 510 Union Trust Bldg., Baltimore, 1912, pp. 40).

Public Finance

THE VOTE ON THE SINGLE TAX IN MISSOURI. In the general election of November, 1912, the voters of Missouri rejected a proposed amendment to the state constitution embodying the principles of the single tax. The amendment was proposed by initiative petition, a method which was made possible by a constitutional amendment concerning the initiative and referendum adopted in 1908. In Missouri, as in other states, the single tax forces have been prominently identified with the movement for securing the initiative and referendum.

The proposed single tax amendment provided for the immediate exemption from taxation of bonds issued by the state or its local units, and for the abandonment in 1914 of taxes on all other forms of personal property, tangible and intangible, together with poll taxes and business licenses (except those imposed under the police power). In the case of real property, land was differentiated from improvements. The latter, to the extent of \$3,000 on each homestead, were to be exempt in 1914; the remainder was to be taxed on three fourths the assessed value in 1914 and 1915; on one half in 1916 and 1917; on one fourth in 1918 and 1919, and thereafter was to be totally exempt. Beginning with 1920, therefore, land (with public utility franchises, which were put in the same category) would have remained as the sole object of taxation, except for an important proviso that the amendment should not be construed "as limiting or denying the power of the State to tax any form of franchise, privilege, or inheritance." The present rigid restrictions on the tax rate were to be repealed, and a separate amendment provided for a permanent tax commission of three members, appointed by the governor, which, in addition to other duties, was to assume those of the present ex-officio State Board of Equalization.

The campaign for the amendment was elaborately organized. The major portion of the necessary funds was supplied, it is understood, by Mr. Joseph Fels, through the Fels Fund Commission. Speakers for the single tax were sent throughout the state, and single tax literature was thoroughly distributed. Of the two principle lines of single tax argument—first, that industry would be stimulated by the removal of the "tax on industry," with its repressive effects; and, second, that private appropriation of the "unearned increment" is unjust—the first was stressed more heavily than the second. This was in line with a general attempt to win votes on the basis of alleged personal advantage to the taxpayer.

Not only were Missouri industries to gain rapidly over competing

industries in other states, still handicapped by the general property tax, but this industrial prosperity, it was said, was to redound to the advantage of landowners (especially urban landowners) through the increase of population and wealth and the resulting rise of land values. Whatever amount increased taxation might take from land values would in this way be more than restored. It is obviously hard to reconcile this position, taken as it was by official spokesmen of the propaganda, with the general tenets of single tax theory relative to the ethics of the "unearned increment."

But an argument even more directly *ad hominem* was used. In St. Louis, for example, detailed estimates were sent to owners of improved property, showing that the total tax bill of each recipient would be reduced if the proposed changes in the tax system were made. In cases where taxes would have been increased, the information was not sent out, but was kept on file and open to inspection at the single tax headquarters. Similar estimates were made for selected agricultural townships, showing that in most cases the increase in the farmer's tax bill would not be large, and that in many individual cases, as where the land was of low value or the farm highly improved, there would be a reduction.

It was expected that the agricultural vote would be adverse to the amendment, but every effort was made to gain rural votes, in the hope that a possible favorable majority in the cities might suffice to carry the state. As it was, the farmers in many sections became thoroughly aroused against the measure, and in such sections debates and other public discussions were more frequent, it is said, than at any time since the free silver campaign of 1896. Much of this discussion, however, centered around Henry George's exposition of the single tax and his own thoroughgoing proposals. It is impossible to say whether this was on account of a general failure to grasp the relatively limited nature of the changes actually proposed in the amendment, or because of a fear that these changes were intended as an entering wedge for the program of the complete government appropriation of land rent. The advocates of the amendment protested that their proposals should be entirely disassociated from Henry George's doctrines. In a widely distributed leaflet written by Dr. William Preston Hill, the president of the local single tax organization, it was said: "Is it not absurd to try to prove the intentions of living men by quoting the works of a dead author? What has Henry George to do with this amendment?"

There is reason, however, for suspecting that the attitude of the

opposition was not altogether illogical. In a circular letter issued on January 4, 1913, by the Fels Fund Commission, it is explained that the large majority against the amendment cannot be regarded as discouraging, for the measure, "however partial," was "recognized and opposed as the single tax." "Since this was so," the letter adds, "one-third of the voters in St. Louis are single taxers, ready for the whole Henry George philosophy." When this avowal is weighed and the fact that little was said during the campaign about the "unearned increment" (in the cities, at least) is also taken into account, it becomes fairly apparent that the campaign for the amendment had some disingenuous features.

Several associations were organized by opponents of the single tax, this organized opposition centering largely in Kansas City. It is unfortunate that much of the active work against the proposed changes was done by men who were willing to defend the worst features of Missouri's present system of taxation, and who were willing to appeal to the crudest prejudices in order to gain votes. Many men who had worked in the past for tax reforms along scientific lines, disheartened by successive failures and yet desiring to protest against present conditions, either gave the new movement a qualified support or refrained from active opposition.

The Democratic and Republican state conventions declared against the amendment, but it received the endorsement of the State Federation of Labor, which in each of the two years immediately previous had declared for the single tax. In St. Louis the labor organizations and the single tax group have coöperated in various ways during the last few years.

The amendment providing for a permanent state tax commission was defeated by a majority nearly as large as that against the single tax. The opponents of the tax took no account of the fact that the proposed commission was precisely of the type now found in many states. They insisted that the proposal for a commission concealed some sinister method of advancing the cause of the single tax. The truth seems to be merely that the friends of the single tax wisely desired that if it were adopted it should be inaugurated under conditions that would favor its efficient administration.

The single tax amendment received in the state 87,000 votes, or fourteen and a half per cent of a total vote of 595,000. A large part of the favorable vote came from the cities. In the counties containing the cities of St. Louis, Kansas City, St. Joseph, and Springfield, thirty-seven per cent of the voters were in favor of the amend-

ment. In the remaining counties of the state the single tax polled only 22,000 in a total of 421,000 votes, or only a little over five per cent. In the city of St. Louis it received forty-two per cent of the vote. It is not surprising that the single tax advocates are now turning their energies toward securing the separation of state and local revenues.

A. A. YOUNG.

INVESTIGATION OF RAILROAD TAXATION IN MINNESOTA. For several years it has been the general opinion in Minnesota that a four per cent tax on the gross earnings of railroads is inadequate. As a result there has been some sentiment, though probably not a great deal, favorable to the ad valorem system. The Minnesota Tax Commission, however, in the report of 1908 and again in 1910, recommended the retention of the gross earnings tax at an advanced rate. In preparation for the report of 1912, the commission created a Department of Research and Statistics, with Professor E. V. Robinson of the University of Minnesota as director, and gave instructions for a more thorough and detailed study of the methods and results of railroad taxation than had previously been made in the state. The report of the new department on this subject forms chapter 14 in the report of the commission for 1912.

After a preliminary survey of theories of taxation in general, the several methods of railroad taxation used in this country are examined, special attention being given to the state board ad valorem system in Michigan and Wisconsin, and to the tax on gross earnings. The conclusion is that ad valorem taxation of railroads is merely an indirect, uncertain, and cumbersome method of taxing earnings. Gross earnings, which are sharply distinguished from gross receipts, are consequently found to be the most logical and most satisfactory basis for the taxation of railroads.

In order to ascertain approximately what the rate of tax on gross earnings ought to be, the true valuation in the state is found by the use of the sales method for real estate, and by comparison of the signed agreements of assessors in the several counties, for personal property. The valuations of the railroads are next calculated on the basis of the commercial valuation in 1904, the claims of all the roads in 1906, the physical valuation by the state in 1907, the claims of several roads in 1908, the value allowed by the district court in 1908 for rate-making purposes, and the claim advanced at the time by the several railroads. All of these valuations are also carried down to 1912 by the ratio plan. The conclusion reached is that a tax of five

per cent on the gross earnings would be warranted on most of the bases named; while if the valuation established by the court for rate-making purposes should be adopted, a tax of six per cent would not be excessive.

After inspection of these figures, the commission issued a statement late in October summarizing the main conclusions; and at the election in November the people by a large majority ratified an amendment advancing the tax on gross earnings to five per cent.

Part IV of *Taxation of Corporations* has been issued by the Commissioner of Corporations (Washington, Nov. 29, 1912, pp. xiii, 144). This is devoted to taxation in the western central states, covering Minnesota, North Dakota, South Dakota, Nebraska, Iowa, Kansas and Missouri. Minnesota is the only state in this group which relies largely on corporation taxes. Special study is made of the taxation of intangible personal property at a low uniform rate, in which a review is made of the methods pursued in the East as well as in the West.

The *Fourth Annual Report on the Statistics of Municipal Finances of Massachusetts for the fiscal year 1909-1910* has recently appeared under the editorial supervision of Charles F. Gettemy, director of the Bureau of Statistics (Boston, 1912, pp. xlvi, 302). Of especial interest is the account of the operations of the new act relating to certification of town notes. It is announced that the report of the special investigation relative to sinking funds and serial loans is nearly ready.

The *Report of the Tax Commissioner of Connecticut for 1911 and 1912* contains an account of the new personal tax law (pp. 10-13), and gives special attention to the work of tax officials, including the assessors and collectors. A considerable space is also given to the succession and inheritance tax laws, and on page 198 will be found a table showing the receipts from inheritance taxes of all the states which had such laws in force in 1912 (Hartford, 1912, pp. 209).

In a *Report in the Matter of the Investigation of the Accounts of the Municipal Ferries of New York*, prepared by the Commissioners of Accounts, there is a financial analysis of what is stated to be New York's first comprehensive experiment in municipal ownership. The city took over in 1905 the Staten Island ferry, which had previously been a losing enterprise. From this and other municipal ferries there has been a continuous financial loss (280 Broadway, New York, 1912).

The Manufacturer's Appraisal Company, of Cleveland, began in October the publication of a quarterly, the "Somer's System News," designed to advance the business of this company in assisting cities in making tax assessments and valuations of property for industrial purposes. The first issue contains 24 pages. Of interest is the article on "Central Boston Assessments," analyzed by Somer's mathematical computations.

Insurance

The Bulletin of the Industrial Commission of Wisconsin, Vol. I, No. 6, Dec. 20, 1912, is devoted to a discussion of *Liability Insurance Rates* (pp. 289-300). Reference is made to the rates offered by old-time companies in different states where compensation laws have been put in operation.

The REVIEW has received *American Public Pension Systems and Civil Service Retirement Plans*, by Frederick L. Hoffman (Prudential Insurance Co., Newark, N. J., pp. 46), in which there is a comprehensive survey of different pension plans and actuarial principles—military, civil, old-age, etc.—which have been in operation in this country.

The address of William T. Emmet, Superintendent of Insurance of New York, on *The Attitude of Present Day Insurance Supervision*, recently delivered before the Association of Life Insurance Presidents, has been printed in pamphlet form (Albany, Dec., 1912, pp. 10).

The text of the *British National Insurance Act, 1911*, is reprinted in Bulletin 102 of the United States Bureau of Labor (July 15, 1912, pp. 87); and that of the *Sickness and Accident Insurance Law of Switzerland*, in Bulletin 103 (Aug. 1, 1912, pp. 27).

The American Telephone and Telegraph Company has issued, under date of January 1, 1913, a pamphlet describing its *Plan for Employees' Pensions, Disability, Benefits, and Insurance* (pp. 14). This plan applies to the employees of allied companies, as the Western Union Telegraph Company.

During the past year the "New York Journal of Commerce" has published a series of brief articles on pension plans of different corporations, railroads, and industrial plants. These have appeared as follows:

Western Union Telegraph Co.	June 12
United States Steel Corporation	June 19
Union and Southern Pacific Railroads	June 26

Wells Fargo Express Co.	July 3
American Express Co.	July 10
National Lead Co.	July 17
American Sugar Refining Co.	July 24
Old Dominion Steamship Co.	Aug. 7
International Harvester Co.	Aug. 14
Consolidated Gas Co. of New York	Aug. 21
Western Electric Co.	Oct. 23
New York Central Railroad Co.	Nov. 6
American Telegraph & Telephone Co.	Nov. 11
Pennsylvania Railroad	Nov. 13
Rock Island Lines	Nov. 20
Armour & Co.	Nov. 25
Atchison, Topeka & Santa Fe Ry.	Nov. 27
Deere & Co.	Dec. 4
Du Pont Powder Co.	Dec. 11
Gorham Mfg. Co.	Dec. 18
National City Bank	Dec. 20
Delaware, Lackawanna & Western R.R.	Dec. 25

Demography

Mortality Statistics 1909, published by the Bureau of the Census, is the tenth annual report on vital statistics compiled under federal authority. Use is made of the census of 1910 to revise the rates for intercensal years 1901-1909. (Washington, 1912, pp. 810.)

Professor Fisher's paper on "A Revised Estimate of the Economic Cost of Tuberculosis" has been reprinted from the *Transactions of the Eighth Annual Meeting of the National Association for the Study and Prevention of Tuberculosis* (pp. 19).

The recent congress of demography has undoubtedly stimulated interest in the subject of vital statistics. Two recent pamphlets in particular may be noted: *The Influence of Vital Statistics on Longevity*, by Dr. Watson S. Rankin, secretary of the North Carolina Board of Health (Raleigh); and *A Report on Vital Statistics, and Health Reports of New York City*, by a committee of the New York Academy of Medicine. This was originally printed in the "Medical Record" of November 23, 1912.

Care of Tuberculosis Wage-Earners in Germany, by Frederick L. Hoffman, is the title of Bulletin 101 of the federal Bureau of Labor (Washington, July 1, 1912, pp. 183). This is an exhaustive study covering mortality, sanatorium treatment, cost of treatment under different systems, with particular reference to invalidity insurance institutions.

The State Department of Health of Maryland has issued a pamphlet on the *Report of Industrial Diseases* (6 East Franklin St., Baltimore, 1912), in which the purpose of the new law of 1912 is explained.

Statistics

Students of statistics will be glad to note that after an interval of two years the publication of the *Annali di Statistica*, the valuable Italian government publication devoted to statistical analysis, has been resumed. The first number of the new series (the fifth) is a monograph by G. Montemartini, entitled *Le Curve Tecniche di Occupazione Industriale*. The author deals at considerable length with the general theory of employment statistics, with special reference to the economic and social purposes which such statistics may serve. Statistics drawn from a wide range of sources are exhibited in tables and diagrams showing the variations in employment in industries of various sorts by months. Two statistical coefficients are thought by Montemartini to be especially significant: the first being the ratio of the minimum number employed in any month of the year to the maximum number, and the second being the ratio of the number constantly employed during the year (twelve times the minimum employment) to the total employment (the sum of the numbers employed in each of the twelve months). The second ratio is made the criterion of a classification of industries into three types. Special emphasis is put upon the practical problems and the possible avenues for governmental action growing out of the coincidence or lack of coincidence in different industries of the variations in the amount of employment of unskilled labor.

A. A. Y.

A monograph by Professor C. Ottolenghi of the University of Camerino, entitled *La Determinazione dei Valori Unitari Medi d'Importazione e d'Esportazione nella Statistica Commerciale* (Turin: S. Lattes & C., 1912) presents the results of an investigation undertaken by the author at the behest of the Italian Ministry of Agriculture, Industry, and Commerce. In the valuation of exports and imports for statistical purposes Italy uses the method of appraisal by an official board rather than of declaration by exporter and importer. These appraisals are not made separately for individual shipments, but are obtained by multiplying the amount of goods exported and imported, classified in over 1400 categories, by the estimated yearly average price per unit of each class of goods. Errors are introduced by reason of both the inadequacy of available price statistics and

the grouping of different grades of goods in one class. Professor Ottolenghi submits a detailed plan for the elimination of both of these sources of error. If his recommendations are adopted better price statistics as well as better trade statistics will be available for Italy.

A. A. Y.

STATISTICAL REFORM IN CANADA. In May, 1912, a departmental commission was appointed to enquire into the statistics of Canada, and to recommend a policy of coördination and re-organization looking to their extension and improvement. Provincial as well as Dominion statistics were included in the scope of the inquiry. The commission consisted of Mr. Richard Grigg, Commissioner of Commerce; Professor Adam Shortt, Civil Service Commissioner; Mr. E. H. Godfrey, Census and Statistics Branch; Mr. W. A. Warne, Statistical Branch, Trade and Commerce; Mr. R. H. Coats, editor of "The Labour Gazette," Department of Labour, and Mr. John R. K. Bristol, Department of Customs. It sat at intervals during the summer and autumn months, and the report was made public in January. (Ministry of Trade and Commerce, Ottawa, 1913, pp. 75.)

In conducting its investigation, the commission proceeded according to subject-matter rather than by departmental organization, and the report is framed on that basis. For the sake of coherence and condensation the usual verbatim statement of evidence is omitted, and the facts thereof presented in a digest which follows the same arrangement as the report proper. The reader may thus turn from the general observations and findings of the commission on any point to a succinct and readable presentation of the main facts on which they are based. As a frontispiece to the report appears a diagram which embodies the commission's conception of the extent and organization of the general field of statistics.

The general finding of the commission is that though many of the statistical reports of the various branches and departments are of undoubted excellence, Canadian statistics as a whole show a lack of coördination and common purpose. Though the British North America Act of 1867 gave the Dominion government specific authority to deal with "Statistics" (a provision which is interpreted by the commission as by no means precluding statistical activity on the part of other governmental bodies), there has been, nevertheless, a conspicuous lack of appreciation of the fact that the statistics of a country, whether the product of one agency or of several agencies, should constitute a single harmonious system. The statistics of Canada are found, accordingly, in some cases to be restricted in scope, to vary

in quality and value, and to involve numerous duplications both as between the Dominion and the Provinces, and as between departments of the same government. To remedy this general situation the commission proposes the creation of a central statistical office under the Dominion government, with the duty of enlarging and coördinating in the first instance the statistics issued on federal authority, and of laboring to secure the coöperation of the Provinces in a correlated treatment of the whole field. The office, in effect, is to be a "thinking" office on the subject of statistics for the whole Dominion. It is not to override or encroach upon purely departmental authority, it being laid down as a principle that "statistics should in every case be collected and analyzed by those who have a full and expert knowledge of the phenomena they illustrate." To assist in the work of centralization, two sets of machinery are suggested: first, an interdepartmental committee consisting of delegates from the various departments which issue statistics; and, second, an interprovincial conference in which the various departments of the several Provinces shall combine with the Dominion departments in the discussion of statistical ways and means.

Turning to more specific topics, the report contains a number of suggestive criticisms and recommendations. The enumeration of population and property, it is thought, is the first duty of the census. A quinquennial census of these is advised. On the subject of production, the institution of an annual census of agricultural, fishing, lumbering, and mining outputs is recommended, the annual statistics of the Commonwealth of Massachusetts being put forward as a model in the case of manufacture, the statistics of agricultural, forestry, fisheries and mines products to depend on more or less elaborate schemes involving interprovincial coöperation. The discrepancies and omissions which have characterized the vital statistics collected by the several provinces in the past are severely censured. The creation of statistics of emigration, and the better coördination of municipal statistics are urged.

Under the heading Trade and Commerce, the chief recommendations are for a better classification scheme (though Canada already classifies her imports and exports more elaborately than any other country) and for better coördination between the statistical branches of the Department of Customs and of the Department of Trade and Commerce. Under the heading Interprovincial Trade, on which important subject no statistics exist, the commission reviews the possibilities of the situation and recommends an experiment in the case of

the more important articles of production and consumption, the list to be enlarged as experience may dictate. The lack of comprehensive periodical reports on wages and household expenditures is pointed out. Other subjects definitely touched upon include industrial accidents, tariff statistics, and publications. A final recommendation is that the appointment of all officials engaged in statistical work should be on grounds of character and capacity alone, under a plan to be reported by the Civil Service Commission.